



IN THE SPECIFICATION

Please replace the paragraph beginning at page 4, line 1, with the following rewritten paragraph:

Also, ~~an~~ the area of the hole is made to be in range of two times to ten times as large as a cross-section area of the electrode pin. This construction can prevent the electrode pins from being shorted with each other even when the holder is formed of a metal. It can also prevent the electrode pins from being dropped out from the holder by the holes even when the closing plug formed of resin and forming the squib is softened at the ignition in the high-temperature state.

Please replace the paragraph beginning at page 4, line 20, with the following rewritten paragraph:

Preferably, the holder is formed of metal such as aluminum, iron, and stainless. Since the holder formed of metal has greater heat resistance than the resin and the like, the holder can reliably prevent the drop-out of the electrode pins from the holder as well as the drop-out of the closing plug at the ignition in the high-temperature state.

Please replace the paragraph beginning at page 6, line 9, with the following rewritten paragraph:

It is preferable that the holder 6 is formed of a metal, such as stainless steel, iron, and aluminum. In FIGS. 1, 2(b), and 2(c), the holder 6 includes a tapered portion 8 of a dish-shaped form for a header ~~B~~ of the squib 5 to be inserted and fitted in, a crimping lug 9 to hold the closing plug B of the squib 5 by crimping, a crimping lug 10 to hold the first cup case 3 by crimping, and a bottom 81 of the tapered portion 8. The materials that may be used for the closing plug B include, for example, polybutylene terephthalate, polyethylene terephthalate,

NYLON-6, and NYLON-66. The holder 6 has holes 13, 14 formed in the bottom 81 of the dish-shaped, tapered portion 8, to permit the passage of two electrode pins 11, 12 standing from the squib 5. The two electrode pins 11, 12 provided in the closing plug B of the squib 5 extend outwardly from the holes 13, 14. The electrode pins 11, 12 are preferably formed of an alloy containing nickel, iron, and stainless. The closing plug B has, in a bottom 16 thereof, projecting portions 19, 18 which are integrally formed to cover root portions of the electrode pins 11, 12. The bottom 16 of the closing plug B is covered with the bottom 81 of the tapered portion 8 of the holder 6, as shown in FIG. 2(a). By virtue of this, even when the closing plug B is softened at the ignition in a high temperature state, the electrode pins 11, 12 are prevented from being dropped out together with the closing plug B by the portion (bottom 81) of the holder 6 where the holes 13, 14 are formed. It is preferable that an area of the hole 13, 14 is in range of more than one time to ten times or less, preferably two times to ten times, or further preferably two times to seven times, as large as a cross-section area of the electrode pin 11, 12. In addition to the holes 13, 14, one or two or more additional holes may be formed, but the formation of only the two holes 13, 14 is advantageous in terms of reduction of the manufacturing cost.

Please replace the paragraph beginning at page 7, line 11, with the following rewritten paragraph:

When the closing plug B of the squib 5 is held by the holder 6, a sealing member 15, such as an O-ring, is disposed between the holder 6 and the closing plug B of the squib 5, to provide moisture ~~proof~~ proofing between the squib 5 and the holder 6. Although no particular limitation is imposed on the material of the sealing member 15, the material through which it is hard for water to pass, such as nitrile rubber, silicon rubber, and ethylene propylene rubber, are preferably used for the sealing member 15. The sealing member is

preferably arranged around the entire circumference of the connection between the holder and the squib.

Please replace the paragraph beginning at page 7, line 20, with the following rewritten paragraph:

The gas generant 2 is packed in the first cup case 3 in direct contact with the inside surface of the first cup case 3 without any intermediary of filter and/or coolant. It is to be noted here that the gas generant comprising a nitrogen-containing organic compound as a fuel component, an inorganic compound as an oxidizing agent component, and an additive comprising at least one additive can be cited as the gas generant that may be preferably used. The fuel components that may be used include at least one material selected from the group consisting of aminotetrazole, guanidine nitrate, and nitroguanidine. The oxidizing agent components that may be used include at least one material selected from the group consisting of strontium nitrate, ammonium nitrate, potassium nitrate, ammonium perchlorate, and potassium perchlorate. The additives that may be used include molybdenum trioxide of a self-ignition catalyst. A binder can also be cited as the additive to be added to the gas generant. The binders that may be used include at least one material selected from the group consisting of guar gum, methyl cellulose, carboxymethyl cellulose, water-soluble cellulose ether, and polyethylene glycol. Gas generant comprising 5-aminotetrazole and guanidine nitrate as the fuel component, strontium nitrate and ammonium perchlorate as the oxidizing agent component, molybdenum trioxide as the self-ignition catalyst, and guar gum as the binder can be cited as a preferable gas generant. Further, a gas generant comprising 10-30mass% 5-aminotetrazole and 15-35mass% guanidine nitrate as the fuel component, 10-30mass% strontium nitrate and 15-35mass% ammonium perchlorate as the oxidizing agent component, 1-10mass% molybdenum trioxide as the self-ignition catalyst, and 1-10mass%

guar gum as the binder can be cited as a further preferable gas generant. The gas generant used in the present invention can be formed in any desired form to be packed in the seatbelt pretensioner and the like. No particular limitation is imposed on the form of the gas generant. The gas generant can be formed in a columnar form or a pellet form. Specifically, (a) 0.25%-5% cationic binder, (b) 0.25%-5% anionic binder, (c) fuel, (d) oxidizing agent, and (e) water or solvent, which is added according to a type of a combustion moderator used, are mixed uniformly and, thereafter, the resultant mixture is kneaded, extruded and cut in a columnar form or is formed in a pellet form by using a tableting machine and the like.

Please replace the paragraph beginning at page 9, line 16, with the following rewritten paragraph:

The squib 5 includes an ignition charge D, a second cup case E packed with the ignition charge D, two electrode pins 11, 12 provided in an upstanding condition to allow the passage of electric current to ignite the ignition charge D, and header B, as shown in FIG. 6. The second cup case E is usually made of thermoplastic resin. The electrode pins 11, 12 project in the interior of the second cup case E and are electrically connected to each other at their front ends through an electric bridge-circuit wire F. The electric bridge-circuit wire F is covered with a firing agent C contacting with the ignition charge D. The closing plug B is formed of a resin in order to provide electrical insulation between the respective electrode pins 11, 12 except the portions thereof corresponding to the electric bridge-circuit wire. In the squib 5 in accordance with this embodiment, the closing plug B has projecting portions 19, 18 which are integrally formed to cover root portions of the electrode pins 11, 12 projecting from the closing plug B, as shown in FIG. 6. The projecting portions 19, 18 have diameters smaller than the holes 13, 14 and are formed of the same material as that of the

closing plug B so as to be integral with the closing plug B. This can surely provide the electrical insulation between the electrode pins 11, 12 and the holder 6.

Please replace the paragraph beginning at page 10, line 12, with the following rewritten paragraph:

The squib case 7 is formed in a cup-like shape to cover a front end of the second cup case E of the squib 5 and a front end of the closing plug B of the squib 5. Also, the squib case 7 has, at an open end portion thereof, a flanged portion 7a formed to extend obliquely in a radially outward direction along the front end portion of the closing plug B. The squib case 7 is secured to the holder 6 together with the closing plug B of the squib 5 by crimping the crimping lug 9 in such a manner as to fold them over onto the flanged portion 7a. Since the second cup case E of the squib 5 is covered with the squib case 7, the force to constrain the second cup case E is increased, so that when the enhancer agent in the squib 5 is ignited and burnt, the second cup case E is prevented from being broken before an internal pressure of the squib 5 is increased, thus permitting the burning of the ignition charge under the high-pressure state. This can provide an increased burning velocity, as compared with the conventional gas generator, thus preventing delay in the ignition of the gas generator 1.

Please replace the paragraph beginning at page 11, line 2, with the following rewritten paragraph:

The squib case 7 is formed of materials including metals, such as iron, aluminum and stainless, and resins, such as PBT (polybutylene terephthalate), PET (polyethylene terephthalate), PA6 (NYLON-6), and PA66 (NYLON-66), PPS (polyphenylene sulfide), PPO (polyphenylene oxide), and fluorocarbon resin. The flame leading hole 20 extending through the squib case 7 is formed in the squib case 7 in a surface thereof contacting with the gas

generant 2. From the standpoints that the high-temperature gas and the particles from the squib 5 are solely oriented toward the gas generant 2 and that the second cup case E is prevented from being broken too quickly, it is preferable that the flame leading hole 20 is formed in the bottom of the closed-end cylinder of the squib case 7 covering the second cup case E. Although it is preferable that the flame leading hole 20 is formed in the bottom of the closed-end cylinder of the squib case 7, the flame leading hole 20 may be formed in a cylindrical portion of the cylinder of the squib case 7. Although the squib case 7 is need not necessarily be formed by a single member but may be formed by combination of several members, it is preferably formed by a single member in terms of reduction in component count. The squib case 7 may be in a meshed form.

Please replace the paragraph beginning at page 12, line 1, with the following rewritten paragraph:

This structure prevents the moisture from entraining in the gas generant 2. In addition, since the squib case 7 is arranged to cover the second cup case E of the squib 5 and is also formed to have the flame leading hole 20 oriented toward the gas generant 2, the energy of the squib 5 is solely oriented toward the gas generant 2. Also, since the second cup case E of the squib 5 is covered with the squib case 7, the force to constrain the second cup case E is increased. Hence, when the ignition charge D in the squib 5 is ignited and burnt, the second cup case E is prevented from being broken before the internal pressure of the squib 5 is increased, thus permitting the burning of the ignition charge under the high-pressure state. This can provide an increased burning velocity, as compared with the conventional gas generator, thus preventing delay in the ignition of the gas generator 1.

Please replace the paragraph beginning at page 12, line 14, with the following rewritten paragraph:

On the other hand, as a result of the increase in strength of the second cup case E, a force to cause the electrode pins 11, 12 to drop out together with the closing plug B is exerted on the electrode pins 11, 12 when the closing plug B is softened at the ignition in the high-temperature state. However, since the bottom 16 of the closing plug B is covered with the holder 6 to reduce the areas of the holes facing the bottom 16 of the closing plug B so as to reduce the shear area of the resin, as compared with the conventional squib structure (Cf. FIG. 3 and FIG. 4(a), (b)), the drop-out of the electrode pins 11, 12 together with the closing plug B is prevented. Although the electrode pins having bent portions in the interior of the closing plug B have been illustrated above in the embodiment, there may be cases where straight pins can be used for the electrode pins used in the squib of the gas generator according to the present invention, depending on the material of the electrode pins, the diameters of the pins, etc.. Even in this variant, since the areas of the holes formed in the bottom 16 of the closing plug B and facing the bottom 16 of the closing plug B are reduced and thus the shear area of the resin is reduced, as mentioned above, it is probable that the drop-out of the electrode pins 11, 12 is prevented.

Please replace the paragraph beginning at page 15, line 1, with the following rewritten paragraph:

The heat test of the gas generator having the structure shown in FIG. 1 was conducted by heating the gas generator by use of a burner. In this heat test of the gas generator, the squib was fixed to the aluminum holder through an O-ring and, then, the aluminum cup case in which the gas generant was sealed was positioned in and joined to a recessed portion of the holder and then fixed thereto by crimping. The heat test was conducted using a cylindrical

jig fitting the propane burner and the squib in an upper portion thereof; having an interior volume of about 3.5cc; and having a gas discharge hole of a diameter of 1mm formed in the bottom. In the heat test, the jig was set over the platform, with its gas discharge hole down and, then, the propane burner was set immediately under it. A The distance between a front end of a flame spurting nozzle of the propane burner and a bottom of the jig was set to be 400mm, and a the height of the flame spurted from the propane burner was set to be 600mm by visual observation. The heat test using the propane burner was conducted until the gas generant was ignited by the heating of the propane burner, followed by the generation of the gas from the gas generant. Since an explosion sound is most often associated with the ignition of the gas generant, one can confirm the ignition from the explosion sound. In the following discussion, the specifications of the squibs used in the heat test and the test results are shown. It should be noted that the modified holder each have holes having diameters of 2.3mm, one for each of the electrode pins, to allow the passage of the electrode pins of the diameter of 1mm. The samples tested were prepared, three for each of the specifications.

Please replace the paragraph beginning at page 16, line 1, with the following rewritten paragraph:

For ~~[[the]]~~ comparison ~~purpose~~ purposes, the conventional gas generator having the electrode pins projecting directly from the holder was used.

Please replace the paragraph beginning at page 16, line 4, with the following rewritten paragraph:

As shown in FIG. 7, in the conventional gas generator of Comparative Example, the electrode pins flew when 950mg of smokeless gunpowder was used, while on the other hand, in the gas generators of Examples, no materials including the electrode pins flew until



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1,700mg of smokeless gunpowder was used. It is found from these facts that the gas generator according to the present invention is effective for preventing the flying resulting from the softening of the resin of the closing plug of the squib in the heat test, as comparing with the conventional gas generator.